

REMARKS

Claims 1 to 19 remain pending in the application.

§112 Claim Rejections

With respect to the rejection to claim 10 under 35 U.S.C. §112, second paragraph, reconsideration by the Examiner is respectfully requested on the following grounds. The term "said member" in line 17 and the term "mesh" in line 23 have been deleted from claim 10 without prejudice, thereby ensuring clear antecedents for the claim limitations. These amendments to claim 10 are believed to overcome the Examiner's rejections under 35 U.S.C. §112. Additionally, line 24 of claim 10 has been voluntarily amended to correctly read "being predetermined" rather than "predetermined being". It is believed that these amendments clarify, but do not narrow the scope of, claim 10.

§103(a) Claim Rejections

With respect to the rejection of claims 1-2, 4, 7-14 and 16-19 under 35 U.S.C. §103(a) as being unpatentable over Gooliak (US 2003/0060107), reconsideration by the Examiner is anticipated on the following grounds.

The Examiner alleges that it would have been obvious to use the thermal blanket taught by Gooliak as a fire retarding device which limits flame propagation, as per the present claimed invention. Gooliak teaches a composite thermal insulating blanket or wrap (30) which comprises, in radially increasing order: an inner layer of metallic mesh (34); a primary insulation blanket layer (36); a carbon fiber radiation barrier layer (38); and an outer silica fabric layer (40) treated with silicone. The

primary purpose of such a thermal insulation blanket is to reduce heat transfer from a high temperature surface such as the tube (32). Each layer of the composite blanket is necessary to successfully achieve this heat transfer reduction, by limiting convection, conduction and radiation from the high temperature body. Therefore, any fire resistance provided by such a composite insulating blanket is achieved by reducing the temperature of the hot body to a level less likely to cause a fire, and/or by shielding the outer surface of the hot body from direct contact with any flammable fluid. This teaches away from the presently claimed invention. The two middle layers of the thermally resistive blanket disclosed by Gooliak provide insulation and a radiation barrier. The outer layer is an encapsulating layer, which can be a metallic foil or stainless steel outer skin (16), which the present fire retarding device does not have. Only the innermost layer (34) of Gooliak's composite blanket, which is said to comprise a "metallic woven or knit mesh layer", even remotely resembles the present claimed invention. However, this inner layer is defined by Gooliak as being a "reflective barrier against radiant heat" (line 8, para. [0026]), which is not the case with the present invention.

The claimed fire retarding device of the present invention particularly comprises elements which are clearly not taught nor suggested by Gooliak, who teaches a blanket which attempts to reduce the heat transfer from the hot body.

Further, the Examiner alleges void size and density is a result effective variable, and that "as void size increases and density decreases, the material becomes more flexible and flame propagation becomes more limited". This is blatantly false. Increasing the void size beyond a predetermined maximum size does not further limit

flame propagation, but would actually permit increased flame propagation. As described in paragraph [0025] of the present application, a flame requires at least a certain amount of space to propagate once ignited. If there is insufficient space adjacent the flame, the flame cannot propagate in that direction. If the plurality of voids all have said predetermined maximum size, there will be insufficient space to allow the flame to propagate. Therefore, the Examiner's allegation that an appropriate void size is merely an optimum value of a result effective variable, is simply untrue.

In view of the forgoing, independent claims 1, 10 and 12 clearly define an invention which is not rendered obvious by Gooliak. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) of claims 1, 10 and 12 is anticipated. Further, at least in view of their dependence on claims 1, 10 and 12, claims 2, 4, 7-9, 11, 13-14 and 16-19 are also not believed to be obvious in view of Gooliak, and therefore withdrawal of their rejection under 35 U.S.C. §103(a) is similarly anticipated.

The Applicant notes the Examiner's comment indicating that the recitation that an element as being "adapted to" perform a function is not a positive limitation. However the Applicant submits that giving the phrase "adapted to cover at least a portion of the hot casing" patentable weight, has no bearing on the objection to the claims as being unpatentable over Gooliak.

With respect to the rejection of claims 1, 3, 5 and 6 under 35 U.S.C. §103(a) as being unpatentable over Nevin (GB 2,266,051 A), reconsideration by the Examiner is anticipated on the following grounds.

The Examiner alleges that Nevin discloses the present invention as claimed in claim 1 except that the filaments are arranged to define voids of a maximum size

throughout the fibrous network, wherein the void size is chosen to limit flame propagation of an ignited fluid through the member. Particularly, the Examiner alleges that void size and density is a result effective variable, and that "as void size increases and density decreases, the material becomes more flexible and flame propagation becomes more limited". As mentioned above, this is simply false. Increasing the void size beyond a predetermined maximum size does not further limit flame propagation, but actually permits increased flame propagation. As described in paragraph [0025] of the present application, a flame requires at least a certain amount of space to propagate once ignited. If there is insufficient space adjacent the flame, the flame cannot propagate in that direction. If the plurality of voids all have said predetermined maximum size, there will be insufficient space to allow the flame to propagate. Therefore, the Examiner's allegation that an appropriate void size is merely an optimum value of a result effective variable, is untrue.

Further, the fire extinguishing carpet disclosed by Nevin operates on the principle that the metal structure reduces the heat and restricts oxygen flow to the fire in such a way to extinguish or at least reduce the fire to a minimum. (page 5) For example, the extinguishing carpet (1n) depicted in Fig. 1, to which the examiner makes reference, comprises an impervious metal foil (2) on its upper side and is described by Nevin to permit rapid extinguishing of flames by cooling the metal nets of the carpet (1n) and by excluding oxygen from the fire by the foil (2). Accordingly, the metallic fire extinguishing carpet disclosed by Nevin acts both as a heat sink, to lower the temperature of the hot gases below their ignition temperature (page 6), and as an impermeable barrier to prevent oxygen from reaching the fire or to prevent

flames from coming in direct contact with the tank or hot object.(page 8) This clearly teaches away from the fire retarding device of the present claimed invention which, in contrast, acts to limit flame propagation of an ignited fluid.

In view of the forgoing, independent claim 1 clearly defines an invention which is not rendered obvious by Nevin. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) of claim 1 is anticipated. Further, at least in view of their dependence on claim 1, claims 3, 5 and 6 are also not believed to be obvious in view of Nevin, and therefore withdrawal of their rejection under 35 U.S.C. §103(a) is similarly anticipated.

Claim 15 was rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Gooliak (US 2003/0060107) in view of Nevin (GB 2,266,051 A). At least in view of its dependence on independent claim 12 and the arguments above, claim 15 would not have been obvious over Gooliak in view of Nevin. Therefore reconsideration of the rejection of claim 15 under 35 U.S.C. §103(a) is anticipated.

It is submitted, therefore, that claims 1 to 19 are in condition for allowance. Reconsideration of the Examiner's rejections is respectfully requested.

In the event that there are any questions concerning this amendment or the application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of this application may be expedited.

Respectfully,

Nov. 11, 2003

Date



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